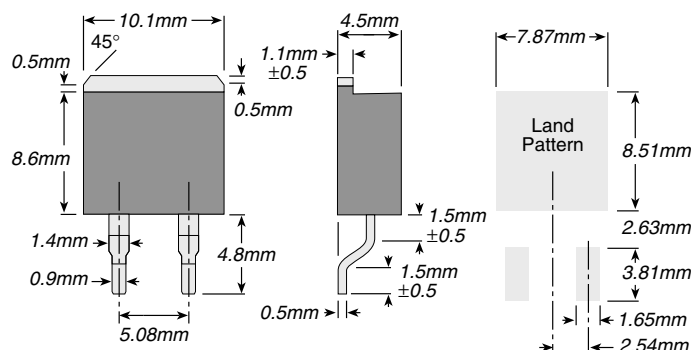


TDH35 Series



T0220 35 Watt Thick Film Power Resistors for Surface Mount, Including Metal Tab RoHS Compliant



T0220 style power package for surface mounting applications; 35W power rating at 25°C case temperature

Soldering note: During surface mount soldering the soldering temperature profile must not cause the metal tab of this device to exceed 220°C (260°C for the TDH35H)!

PERFORMANCE CHARACTERISTICS

Derating	100% @ 25°C to 0% @ 150°C curve referenced to case temperature
Dielectric Strength	1,800VAC
Max. Mounting Torque	0.9Nm
Operating Temperature Range	-55°C to +150°C
Temperature Coefficient	10Ω and above, ± 50ppm/°C, referenced to 25°C, ΔR taken at +105°C. Between 1Ω and 10Ω, ± (100ppm+0.002Ω)/°C, referenced to 25°C, ΔR taken at +105°C.

TEST DATA

Load Life	(MIL-R-39009, 2,000 hours)	ΔR ±(1.0% + 0.01Ω)
Moisture Resistance	(MIL-Std-202, Method 106)	ΔR =(0.5% + 0.01Ω) max.
Short Time Overload	(2 times rated power with applied voltage not to exceed 1.5 times maximum continuous operating voltage for 5 seconds)	ΔR ±(0.3% + 0.01Ω) max.
Thermal Shock	(MIL-Std-202, Method 107, Cond. F)	ΔR =(0.3% + 0.01Ω) max.
Terminal Strength	(MIL-Std-202, Method 211, Cond. A (Pull Test) 2.4N)	ΔR =(0.2% + 0.01Ω) max.
Vibration, High Frequency	(MIL-STD-202, method 211, cond. A (pull test) 2.4N)	ΔR =(0.2% + 0.01Ω) max.

ORDERING INFORMATION

TDH35PR100JE-T				Tape and reel (optional) 750 per reel
Style	Package Modifier	Ohms	Tolerance	RoHS Compliant
	P = low temp. H = high temp.	R = Decimal Example: R100= 0.10 1R00= 1.0 10K0= 10,000	F = 1% J = 5% K = 10%	Non-compliant version not recommended for new designs

FEATURES

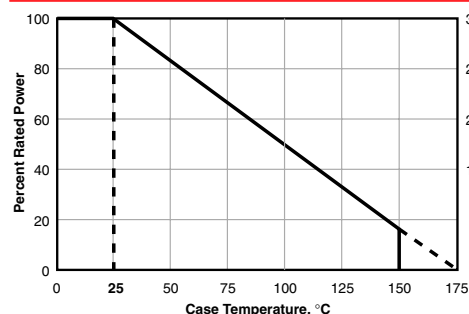
- 35 Watt power rating at 25°C
- SMD - TO-220 package configuration
- Heat resistance to cooling plate: $R_{th} < 4.28^{\circ}\text{C/W}$
- A molded case for environmental protection.
- Resistor element is electrically insulated from the metal sink tab.

SPECIFICATIONS

Material
Terminal: Copper
Terminal Plating: Lead Free Solder (97% Tin, 3% Silver)

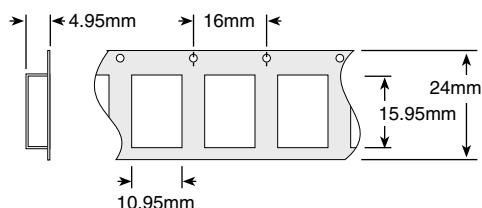
Electrical
Resistance Range: 0.1Ω to 10KΩ
other values on request
Tolerance: ±1% to ±10%
(0.5% on request)
Max. Operating Voltage: 350V
Insulation Resistance: 10GΩ min.
Power Rating: Depends upon case temperature. See derating curve.
Working Temperature Range: -55°C to +175°C
Solder Process: The TDH35P cannot exceed 220°C (260°C for the TDH35H) for more than 10 seconds during soldering process.

DERATING



Derating (thermal resistance): 0.23W/°C (4.28°C/W). The case temperature is to be used for purposes of establishing the applied power limit. The case temperature measurement must be made with a thermocouple contacting the center of the component mounted on the designed heat sink. Thermal grease should be applied properly.

TAPE DIMENSIONS



STOCK PART NUMBERS

Ohms	Part Number	5% Tolerance	Ohms	Part Number	5% Tolerance
0.10	TDH35PR100JE		47	TDH35P47R0JE	
0.15	TDH35PR150JE		68	TDH35P68R0JE	
0.20	TDH35PR200JE		75	TDH35P75R0JE	
0.25	TDH35PR250JE		100	TDH35P100RJE	
0.30	TDH35PR300JE		150	TDH35P150RJE	
0.36	TDH35PR360JE		200	TDH35P200RJE	
0.47	TDH35PR470JE		250	TDH35P250RJE	
0.50	TDH35PR500JE		300	TDH35P300RJE	
0.75	TDH35PR750JE		500	TDH35P500RJE	
1.0	TDH35P1R00JE		750	TDH35P750RJE	
2.0	TDH35P2R00JE		1000	TDH35P1K00JE	
3.0	TDH35P3R00JE		1500	TDH35P1K50JE	
5.0	TDH35P5R00JE		2500	TDH35P2K50JE	
7.5	TDH35P7R50JE		3000	TDH35P3K00JE	
10	TDH35P10R0JE		5000	TDH35P5K00JE	
15	TDH35P15R0JE				
20	TDH35P20R0JE				
25	TDH35P25R0JE				
33	TDH35P33R0JE				
39	TDH35P39R0JE				